Defense Information Systems Agency

A Combat Support Agency

Delivering Modernized C2

PEO-C2C

DISA

A Combat Support Agency

Modernized C2

USER-FOCUSED: Enabling THE OPERATIONAL PERSPECTIVE

ENTERPRISE COMMON OPERATIONAL PICTURE
JOINT C2 COMMON USER INTERFACE
CROSS-DOMAIN SERVICES

JOINT PLANNING AND EXECUTION SERVICES
INTEGRATED GAMING SYSTEM
RAPID TPFDD BUILDER
JPES FRAMEWORK

Collaborative Decision Making

Need for agile, flexible, and intuitive capabilities!

DISA

A Combat Support Agency

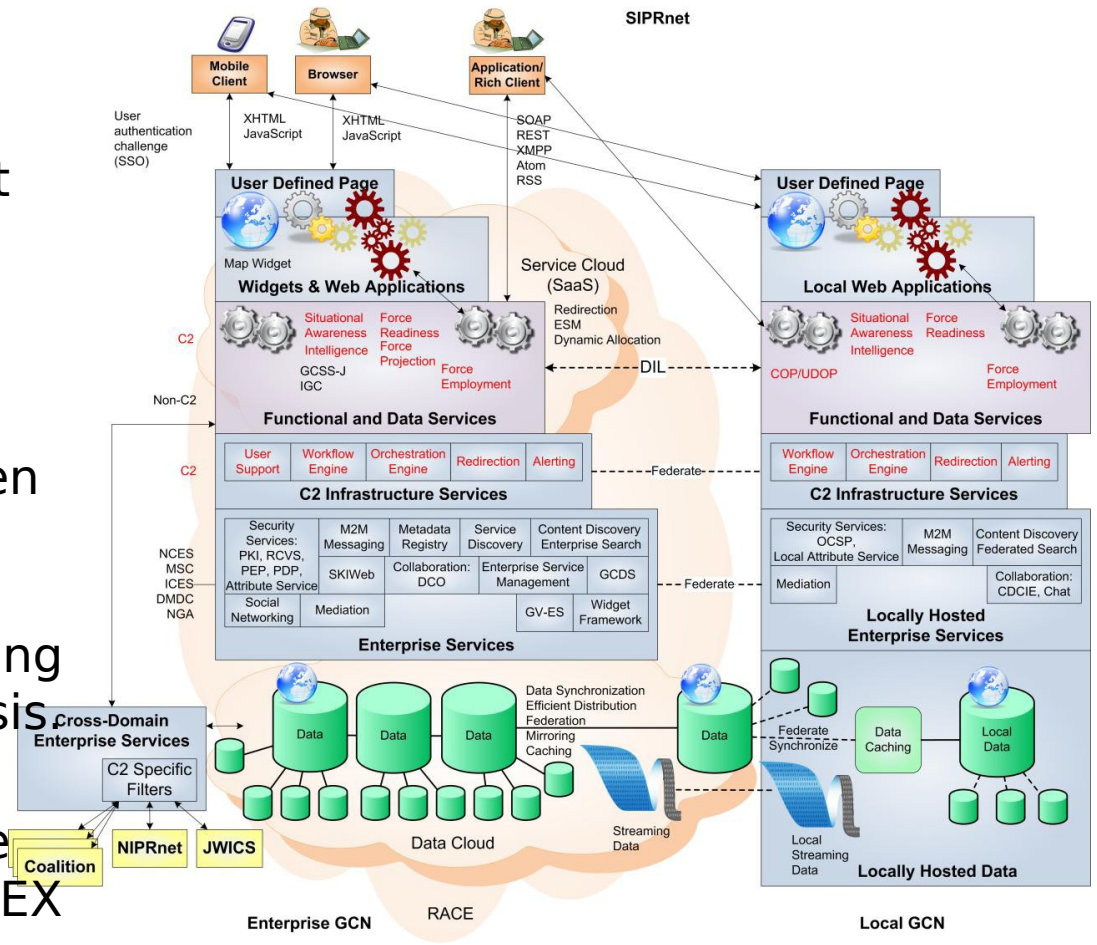
PEO-C2C Vision

What: Deliver capability quickly that is relevant and easy to use by changing what we deliver and how it is developed, tested, certified, fielded and sustained.

How: Following a principled strategy for migration of existing capabilities and driven by a Joint C2 Objective Architecture.

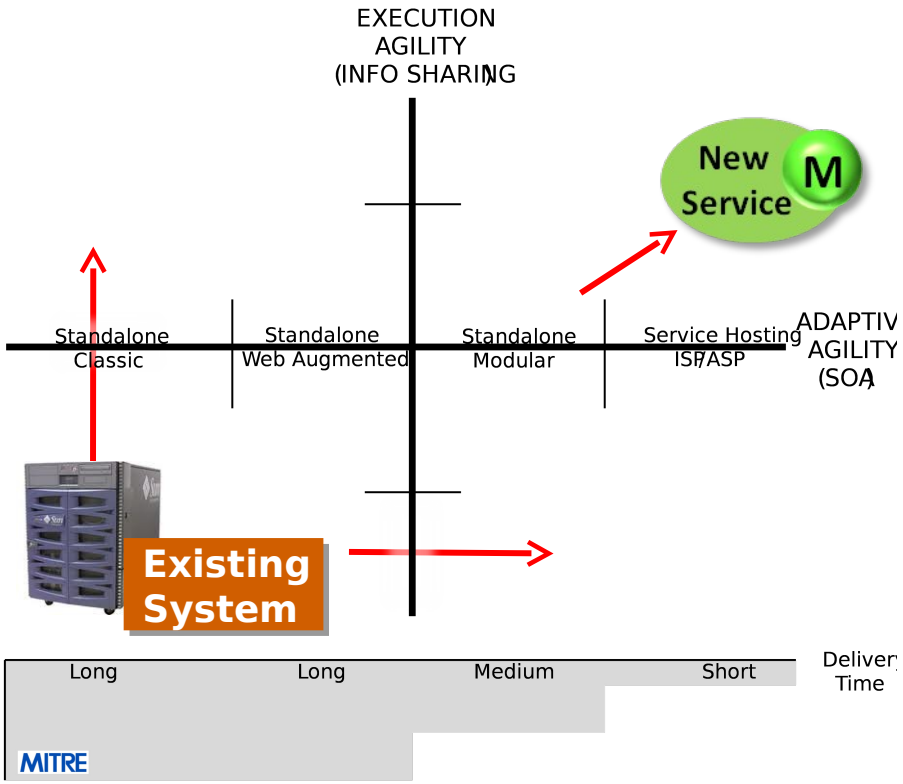
When: Weeks and months versus years. Portfolio planning will be done on an annual basis.

Where: DISA is one provider among many that will provide capabilities to the Joint C2/APEX portfolio.



DISA
A Combat Support Agency

Agility Matrix



Agility derived from:

- Small units of delivery
- Components focused on service delivery
- Components can be hosted in cloud
- Leverage cloud for availability, scalability, security
- Reliance on services provided by other components

Increased IT agility leads to improved execution agility

Migration Principles

DISA
A Combat Support Agency

Local→Enterprise

- Expose data for consumption within and external to the C2 community
- Maximize use of enterprise infrastructure services to include hosting
  (Exploit the cloud!!!)

Large→Small

- Small, discrete capabilities released as they are available
- Product lines mapped to n-tier design pattern

Static→Tailorable

- Consolidate duplicative graphical user interfaces (GUI)
- Presentation tier design pattern facilitates user customization
- Support composeability in visualization layer and leverage exposed data services

Leverage Frameworks

- Consistent infrastructure and processes to support 3rd party development
- Improved consistency of approach lowers training costs
- Examples: Ozone Widget Framework (OWF) and Agile Client

Agile Development

- Employ user centered design process to optimize user experience through warfighter engagement
- Improves relevance of delivered capabilities

Migrate incrementally based on Warfighter Priorities and

DISA

A Combat Support Agency

Agile Development

***Agile* is an iterative and incremental (evolutionary) approach to software development which [sic] is performed in a highly collaborative manner with "just enough" ceremony that produces high quality software which meets the changing needs of its stakeholders.**

(http://www.agilemodeling.com/essays/agileSoftwareDevelopment.htm)

Agile Manifesto Values:

Individuals and interactions *over* processes and tools
Working software *over* comprehensive documentation
Customer collaboration *over* contract negotiation
Responding to change *over* following a plan

That is, while there is value in the items on the right, we value the items on the left more.
(http://agilemanifesto.org/)

Lessons Learned:

- **It takes *commitment* … no free lunch.**
- **Payoff is *quicker delivery* of *relevant* capability. Said another way…you don't have to wait years to find out the requirement was either wrong or misunderstood by the developer.**

DISA

A Combat Support Agency

The Value of Frameworks

The OWF Example

OZONE Widget Framework (OWF)

Vision Statement

- ***To provide a common thin-client environment for dynamic workflows using lightweight web-applications (widgets) distributed across the enterprise.***

OWF Core Values

- **Low Barrier to Entry**
- **Technology Agnostic**
- **Low Integration Costs**
- **Decentralized Ownership**
- **Decoupled Architecture**
  - **Extensible**
  - **Distributed Deployment**

Value Proposition

- **Rapidly Integrate New Components**
- **Decrease Time to Market**
- **Support for 3d Party Development**

Frameworks provide the structure to enable rapid delivery of

DISA
A Combat Support Agency

Summary

- **Evolving to deliver services contributing to a portfolio of capabilities**
- **Focusing on core competency of delivering application and data services utilizing enterprise infrastructure services**
- **Annual build plans allow for changes in requirements and technology thus improving relevancy of delivered capabilities**

Supporting Warfighter information needs by

DEFENSE INFORMATION SYSTEMS AGENCY

Summary Recommendation

- Implement the following "Joint C2 Modernization Strategy" – as the AoA's *Preferred Alternative*
  - Create a federated joint C2 "Family of Programs" with annual funding across all appropriations and Components of approximately $500M/year
  - Establish a revised management and governance construct that includes:
    - » Integrated centralized modernization planning, architecture development/system engineering, and synchronization/coordination of program execution activities
    - » Allocation of responsibilities for satisfying full DOTMLPF_P solutions for joint C2 capability needs to the Components
    - » Decentralized development/acquisition of system solutions by the Components
  - Project/define annual program work based on Components' capabilities and programmed resources -- expected to total approximately $500/yr
    - » System architecture development work to be compliant with the Joint C2 Objective Architecture, Transition Architectures, and Implementation Guidance
    - » Achieve broad user access to data across the joint force following DoD Net-Centric Data and Services Strategies
    - » Components fund sustainment and synchronization to ensure "Do No Harm"
    - » Identify initiatives to specifically reduce sustainment costs over the FYDP
    - » Balance investments for sustainment/synchronization, initiatives to reduce sustainment costs, and modernization of capabilities annually and across FYDP
  - Target initial implementation for FY12; update implementation plan annually thereafter via improved Plan Build process
  - Initiate critical post-AoA activities to develop an *Implementation Plan* immediately